

Radiosonde Cloud Assessment System, Phase II

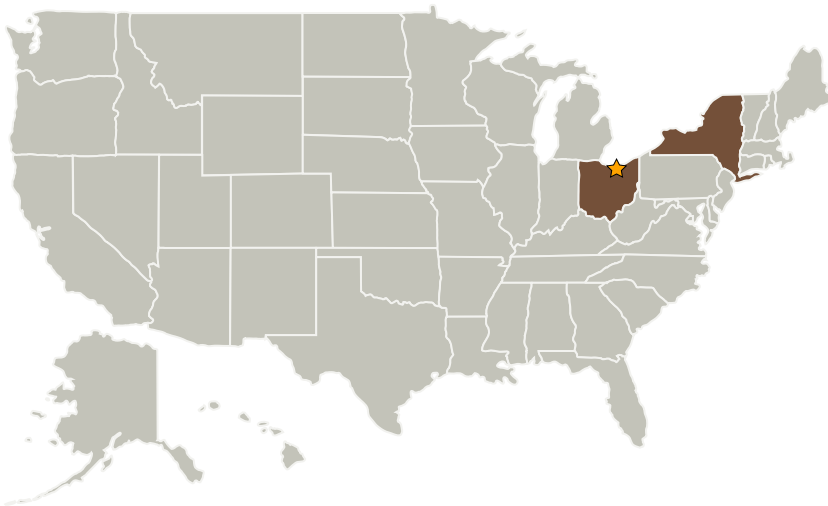
Completed Technology Project (2006 - 2008)



Project Introduction

Improvements in existing technologies for icing weather information systems are required to increase the level of safety for aircraft flying in the atmospheric icing environment. Icing forecasts cannot provide the needed accuracy at the present time. Under a NASA sponsored SBIR program, Innovative Dynamics, Inc. is developing a Radiosonde Cloud Assessment System (RCLASS) that measures liquid water content, drop size, and droplet phase using low-power infrared lasers. These parameters would be used to identify certain cloud conditions that pose airborne icing hazards to aircraft. The innovation is a new capability for measuring cloud properties that would consist of a small optical probe flown on an expendable weather balloon. Phase I demonstrated the feasibility of the IR-based approach. A series of tests were conducted in an environmental test chamber to demonstrate the overall detection capability. The proposed Phase II will continue development and calibration of the sensor package and integrate it into a commercially available balloonsonde system for evaluation testing in the atmosphere.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Glenn Research Center(GRC)	Lead Organization	NASA Center	Cleveland, Ohio
Innovative Dynamics, Inc.	Supporting Organization	Industry	Ithaca, New York



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Glenn Research Center (GRC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations

New York

Ohio

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX01 Propulsion Systems
 - └ TX01.3 Aero Propulsion
 - └ TX01.3.11 Engine Icing